

### **REMARKS**

The present Amendment is in response to the Examiner's Office Action mailed August 27, 2007. Claims 9 and 22 are amended and claims 9-14 and 22-28 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

### **Rejections Under 35 U.S.C. § 103**

The Examiner rejects claims 9-14 and 22-28 under 35 U.S.C. § 103 as being unpatentable over *Diaz et al.* (U.S. Patent Publication No. 2002/0064193) in view of *Riazat et al.* (U.S. Patent Publication No. 2003/0138008) and further in view of *Tatehara et al.* (U.S. Patent Publication No. 2003/0086456). Applicants traverse the Examiner's rejection for obviousness on the grounds that the references – either individually or in combination – fail to teach or suggest each and every element of the rejected claims.

Claim 9 is directed to a laser driver and has been amended to require a control signal source that controls the first switch and the second switch according to a data signal such that the first switch is open when the second switch is closed and such that the first switch is closed when the second switch is open. Claim 9 has been further amended that the first current and the second current are provided to the laser diode by the first PNP transistor current source, the second PNP transistor current source and the current sink.

The structure of the first and second switch recited in claim 9 is not taught or suggested by the cited art. More specifically, claim 9 requires the first and second switch to be coupled, respectively, to first and second inductors that are coupled with first and second PNP transistor current sources. The first and second switches are also coupled to the current sink in claim 9.

The Office Action admits that *Diaz* does not teach an additional PNP current source and inductor. Failure to teach these aspects of claim 9 also indicates that the second switch as recited in claim 9 is not taught or suggested by *Diaz*. In addition, the requirement that the first switch is open when the second switch is closed is likewise not taught or suggested by *Diaz* because of the absence of these elements (*e.g.*, the second PNP current source, the second switch, and the second inductor).

The Examiner attempts to remedy these deficiencies by citing to *Tatehara* and *Riaziat*. These references, however, fail to illustrate the structure of a second switch, among other elements, that are required by claim 9.

More specifically, *Tatehara* is cited for allowing differential driving of the laser diode. *Tatehara* teaches that the "laser is turned ON" (*see* ¶ [0080]) or that the "laser is turned OFF" (*see* ¶[0082]. Claim 9, in contrast, requires either a first current or a second current be provided to the laser diode depending on the states of the first and second switches. Because claim 9 requires either a first current or a second current to the diode instead of turning the laser ON or OFF, the teachings of *Tatehara* fail to establish the *prima facie* case of obviousness, when combined with *Diaz*. *Riaziat* only discloses that a differential drive approach "minimizes the effect of the parasitics associated with the grounding of the package." *See* ¶[0005]. Minimizing parasitics fails to teach or suggest the elements required by claim 9. As a result, the Office Action has not established that each and every element of the claim 9 is taught or suggested by the cited art.

In addition, claim 9 has been amended to clarify that the current sink is connected to the first side of the laser diode when the first switch is closed and to the second side of the laser diode when the second switch is closed. This structure of the first and second switches and how they connect the current sink to the laser diode, as controlled by the control signal source, results in either the first current or the second

current being provided to the laser diode. Such a structure is not achieved by the duplication of parts and is not taught or suggested by the cited art.

Further, the Office Action states that it would be obvious to duplicate parts. The structure required by claim 9, however, does not appear to satisfy the requirements of duplication of parts. More specifically, the second PNP transistor current source is coupled to a second side of the laser diode through a second inductor while the first PNP transistor current source is coupled, through a first inductor, to the first side of the laser diode. Further, the states (open or closed) of the first and second switches has an impact on the current that is provided to the laser diode. The first and second PNP transistor current sources, in contrast to the ribs discussed in MPEP 2144(VI)(B), do not couple to the same structure and is not, therefore, the mere duplication of parts. In addition, the connection of the current sink to different sides of the laser diode according to the states (open or closed) of the first and second switches, is not taught or suggested by the mere duplication of parts.

For at least these reasons, Applicants respectfully submit that claim 9 is patentable over the cited art. Claim 22 is patentable for at least the same reasons. The dependent claims are patentable for at least the same reasons.

### **CONCLUSION**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 28<sup>th</sup> day of January, 2008.

Respectfully submitted,

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